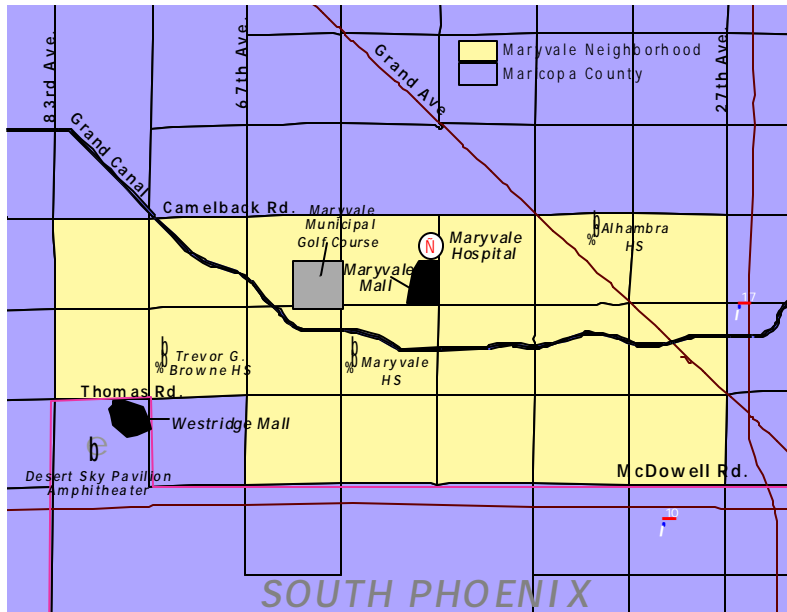


Section VI. Maryvale Area Analysis

INTRODUCTION

Maryvale Neighborhood, Phoenix, Arizona



The Maryvale Neighborhood is composed of 19 census tracts embedded within the city of Phoenix between McDowell and Thomas Roads from 27th to 67th Avenues and between Thomas and Camelback Roads from 27th to 83rd Avenues. The 1990 census tracts defining Maryvale include 109100-109500, 109601, 109602, 109701, 109702, 109800-110000, 110100, 110200, 112100, 112200, 112300, 112400, and 112502. See Appendix A, Map 2 for the location of the Maryvale Neighborhood in Maricopa County.

In September of 1999, the Maryvale Prenatal Care Public Awareness Project was founded by the Healthy Mothers Healthy Babies Maricopa County Coalition and MCDPH to improve birth outcomes in the Maryvale community. The mission of the project is to promote community awareness about infant mortality and prenatal care issues and to support services that foster healthy mothers, healthy babies, and strengthen families. The project has been successful with significant accomplishments including:

- MCDPH provided funding for increasing awareness of MCH issues, educating the community about available resources, and for the recruitment of coalition members from the community. Consequently, attendance at project meetings doubled.
- The MCDPH Community Health Nurses visited ten obstetric offices serving Maryvale women to raise awareness about MCH concerns and to assess patient needs based on focus group interviews.
- 500 MCH Resource Directories designed for agency personnel were printed and distributed.
- 22,000 bilingual pregnancy hotline outreach brochures were produced – approximately half have been distributed.
- Communication and networking between social service agencies serving the Maryvale Neighborhood increased.
- Grant proposals to fund outreach activities to pregnant women are in progress.

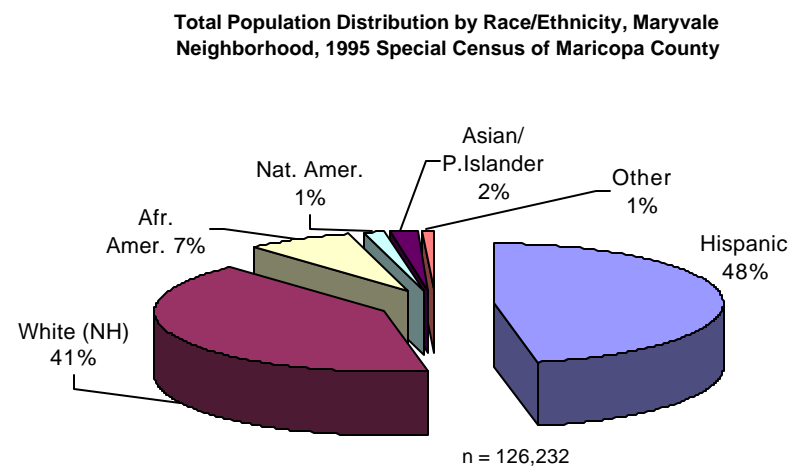
- Teen pregnancy prevention events (Teen Maze) are taking place at local high schools.
- Elected officials support the project.
- A pocket guide of community resources is being designed for the public.

Child and maternal health data from 1996 to 1999 were initially assembled by public health epidemiology students²⁰ and have been utilized for identifying areas of need within the Maryvale Neighborhood. The findings of this needs assessment are intended to provide direction for public health interventions by the Maryvale Prenatal Care Public Awareness Project and other services to improve the overall health in the Maryvale Neighborhood.

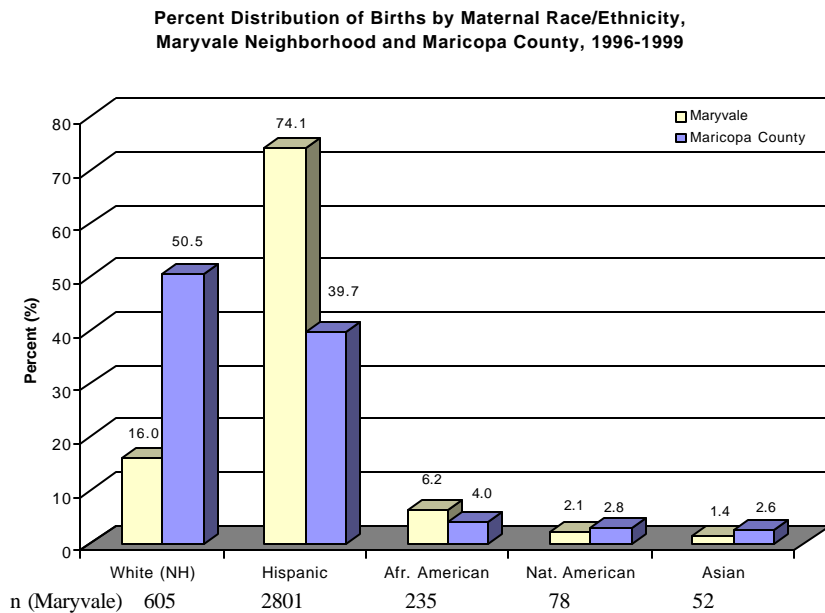
Use caution when examining and interpreting the results because some percentages and/or rates may be based on numbers too small to be meaningful. The number of individuals in any particular category may be small. For example, if women 45 years of age or older in the Maryvale Neighborhood had the same infant mortality rate (IMR) as all other births (e.g., 7/1000) but there were only four live births, there would be no deaths in a group of only four live births. This does not suggest that women 45 years of age and older have an IMR of zero; it means there were not enough births to have at least one death. The numbers used for each graph appear in tables in the “Maricopa County Maternal and Child Health Needs Assessment 2001: Supplemental Data Tables.”

SOCIAL AND DEMOGRAPHIC PROFILE

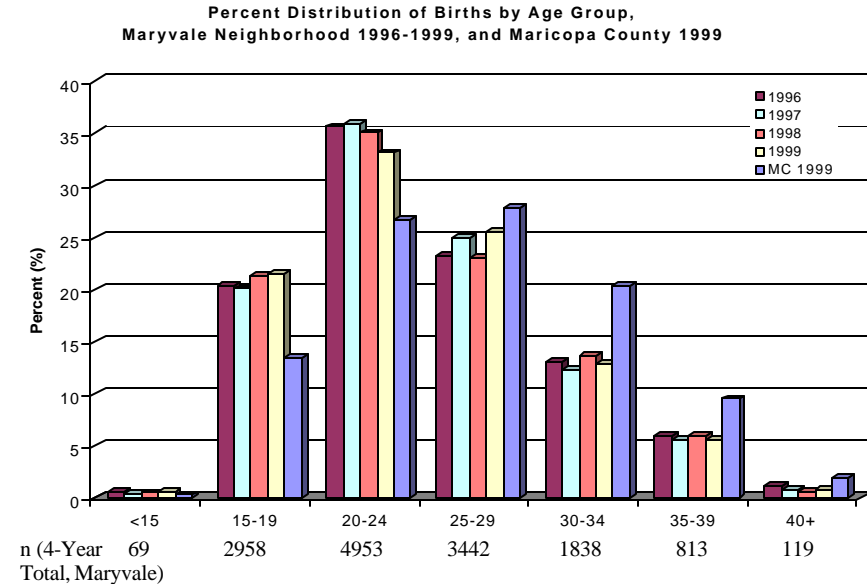
The 1995 Special Census¹¹ estimated population of the Maryvale Neighborhood was 126,232, which accounted for almost 5% of the Maricopa County population. The largest population groups in the Maryvale Neighborhood were Hispanic (48%) and White (41%). In 1995, the proportion of women 21 years old and younger was higher in the Maryvale Neighborhood than in Maricopa County.



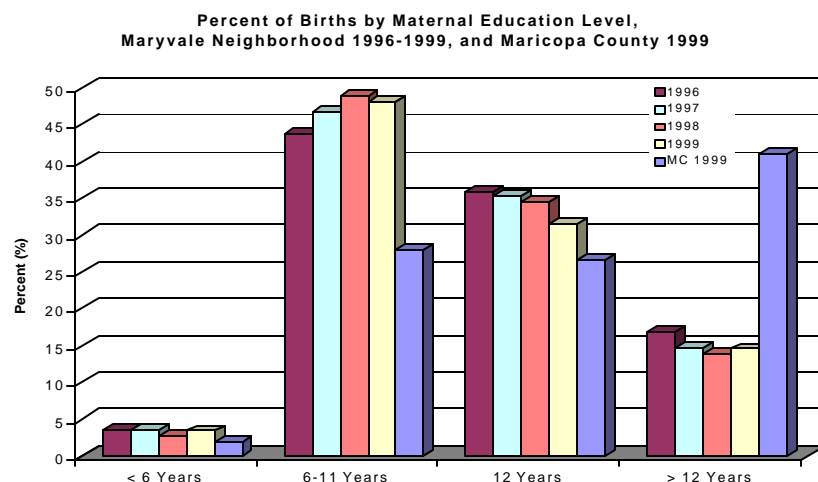
The total number of births to residents of the Maryvale Neighborhood in 1999 was 3,781. Births to residents of Maricopa County were 51,535. In the Maryvale Neighborhood, Hispanics accounted for 2,801 births (74.1%) and Whites for 605 births (16%) while in Maricopa County, there were 26,010 births to Whites (50.5%) and 20,469 births to Hispanics (39.7%).



Mothers residing in the Maryvale Neighborhood were more likely to be younger than mothers residing in Maricopa County. The age distribution in the Maryvale Neighborhood shows a higher proportion of mothers less than 25 years of age than in Maricopa County. From 1996 to 1999, mothers aged 20-24 made up the single largest age category in the Maryvale Neighborhood, while those 25-29 comprised the predominant age group in Maricopa County in 1999. The percent of mothers in the Maryvale Neighborhood aged 15 to 19 increased slightly between 1997 and 1999.

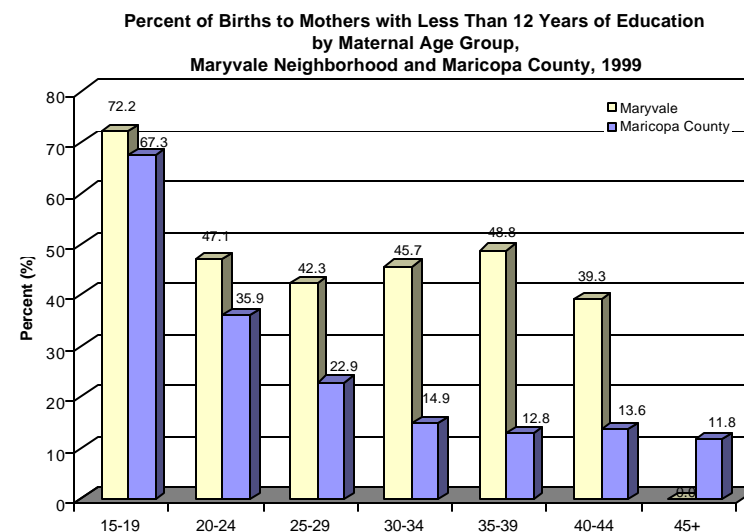
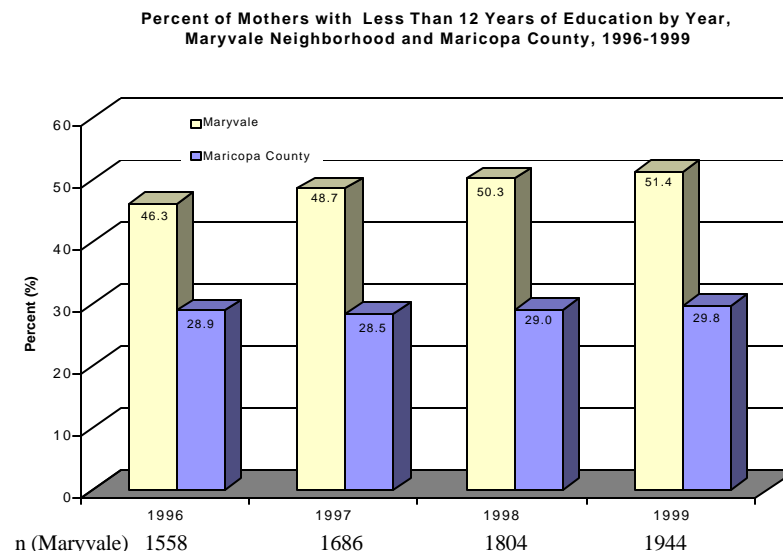


From 1996 to 1999 in the Maryvale Neighborhood, the percentage of births to mothers with 6 to 11 years of education increased slightly, while the percentage of birth to mothers with 12 years of education decreased slightly. The percentage of mothers with more than a high school education was lower each year in the Maryvale Neighborhood than in the county.

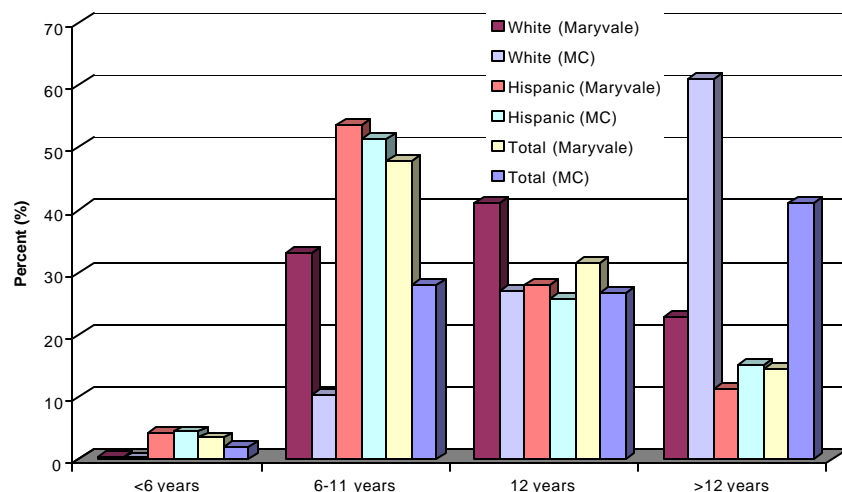


The percentage of mothers not graduating from high school (less than 12 years of education) increased from 1996 (46.3%) to 1999 (51.4%) in the Maryvale Neighborhood. In contrast, percentages remained fairly constant for all years in Maricopa County.

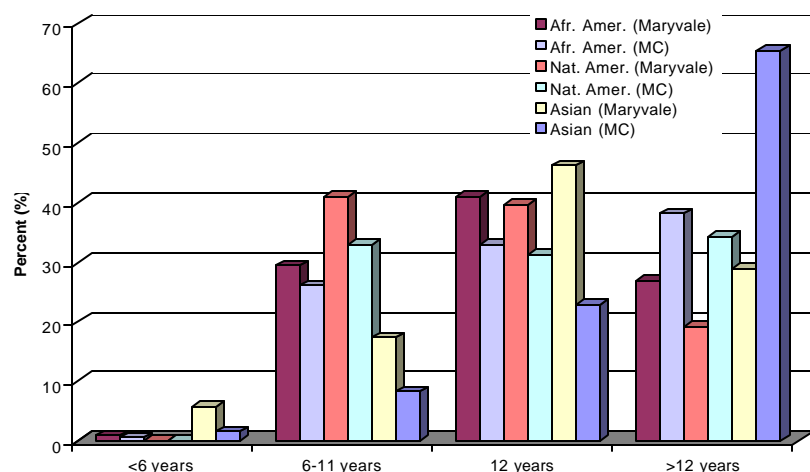
Across all age groups, mothers residing in the Maryvale Neighborhood were less likely to have finished high school than mothers countywide were. Because there was only one birth to a woman in the 45 years and older age category in the Maryvale Neighborhood during 1999, the comparison for that age group is not valid.



Maternal Education Status of Whites and Hispanics, Maryvale Neighborhood and Maricopa County, 1999

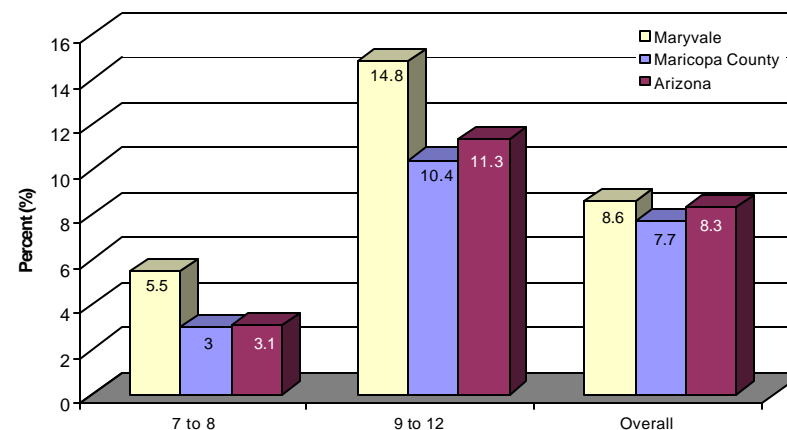


Maternal Education Status of African Americans, Native Americans, and Asians, Maryvale Neighborhood and Maricopa County, 1999



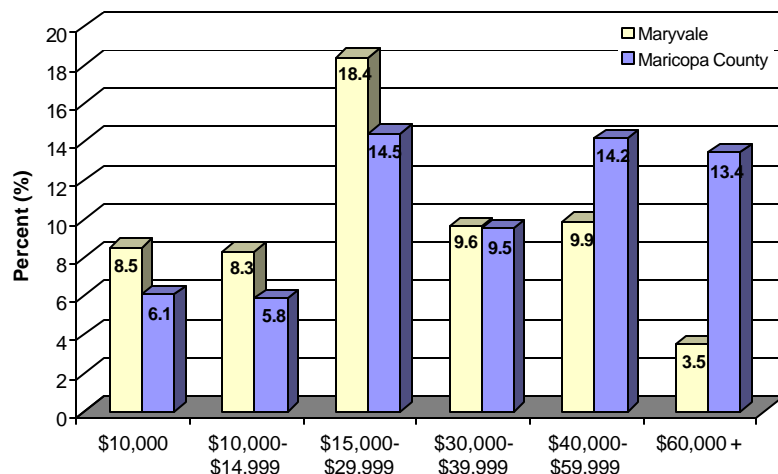
In 1999, the percentage of mothers who did not complete high school (<12 years) was highest among Hispanics in both the Maryvale Neighborhood (68.3%) and Maricopa County (55.9%), followed by Native Americans with 40.2% and 32.9%, respectively.

Drop-out Rates, Grades 7-8 and 9-12, Maryvale Neighborhood, Maricopa County, and Arizona, 1999-2000 School Year



The Maryvale dropout rate represents the average dropout rate for all schools within the Maryvale neighborhood¹⁹. The overall dropout rate for the Maryvale Neighborhood from 7th to 12th grades (8.6/100) was higher than the county (7.7/100) rate and the State of Arizona rate (8.3/100). The grade-specific dropout rates followed a similar pattern.

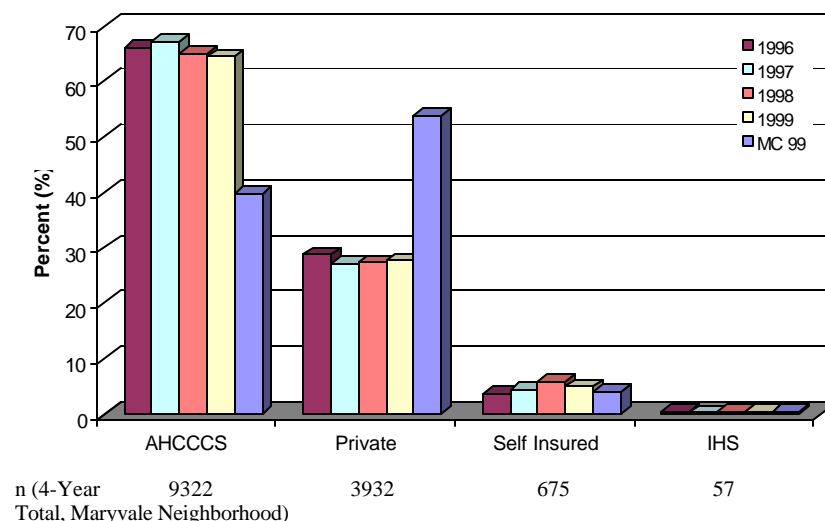
**Percent Distribution of Household Income,
Maryvale Neighborhood and Maricopa County, 1995**



According to the 1995 Special Census ¹¹, the percentage of households earning less than \$30,000 per year was higher in the Maryvale Neighborhood than in all of Maricopa County.

The largest source of payment for delivery of births in the Maryvale Neighborhood from 1996 to 1999 was AHCCCS (64.5% in 1999) while private insurance was the second largest source (27.7 in 1999). In contrast, private insurance (53.8%) was the largest method of payment for delivery in Maricopa County during 1999 followed by AHCCCS (39.7%). The percent of women using private insurance in the Maryvale Neighborhood has been stable, 27-28%, during the 1996-1999 period. See Appendix A, Map 4 for the distribution of births paid for by AHCCCS by census tract between 1996 and 1999.

**Percent of Births by Source of Payment for Delivery, Maryvale
Neighborhood 1996-1999, and Maricopa County 1999**

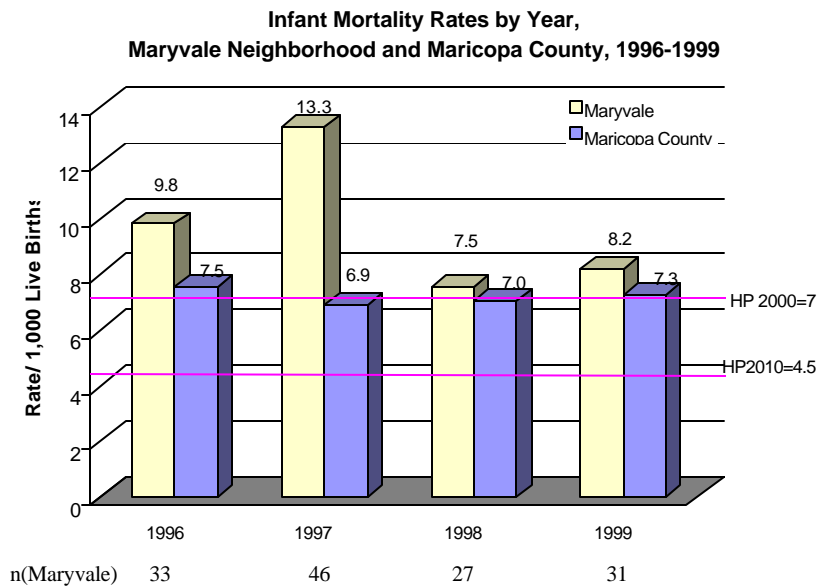


Between April 11 and June 18, 2001, focus group interviews with staff from 10 obstetric provider offices serving the Maryvale Neighborhood were conducted to assess patient needs. Providers indicated that the lack of funding for assistance to women not eligible for AHCCCS services and the lack of materials and services available in both English and Spanish were the two problems of greatest concern. A need for more information on social and behavioral resources and better access to social service personnel, especially by phone, was also indicated. Referrals were issued mostly to WIC, AHCCCS, DES, and the Maricopa County STD Clinic. Providers expressed interest in patient follow-up after referrals to social service agencies. The small number of referrals may be indicative of a lack of provider knowledge about available resources, a

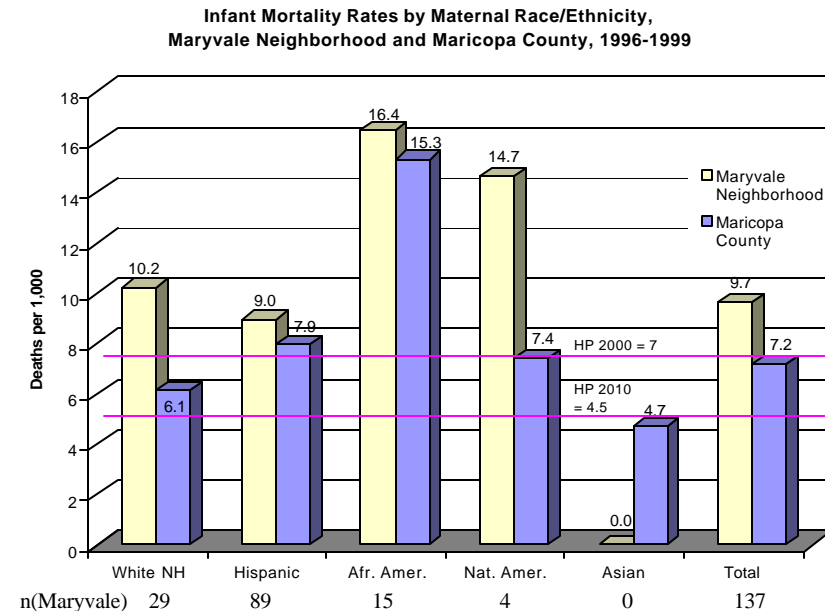
perceived lack of need, or frustration from previous problems with agency personnel.

INFANT MORTALITY RATES

From 1996 to 1999, there were 137 infant deaths in the Maryvale Neighborhood, yielding an infant mortality rate (IMR) of 9.7 per 1,000 live births. 87 of these deaths were neonatal (less than 28 days old) and 50 were post-neonatal (28 to 365 days old). See Appendix A, Map 5 for IMR by census tract.

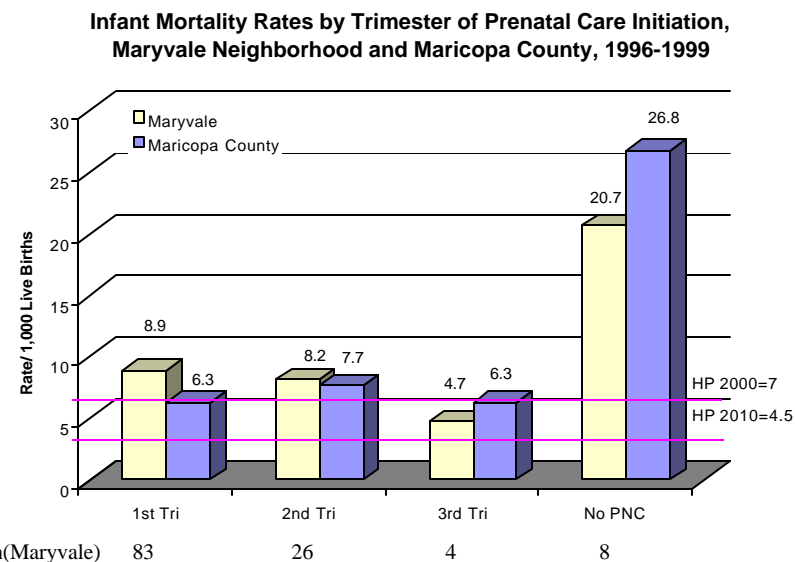
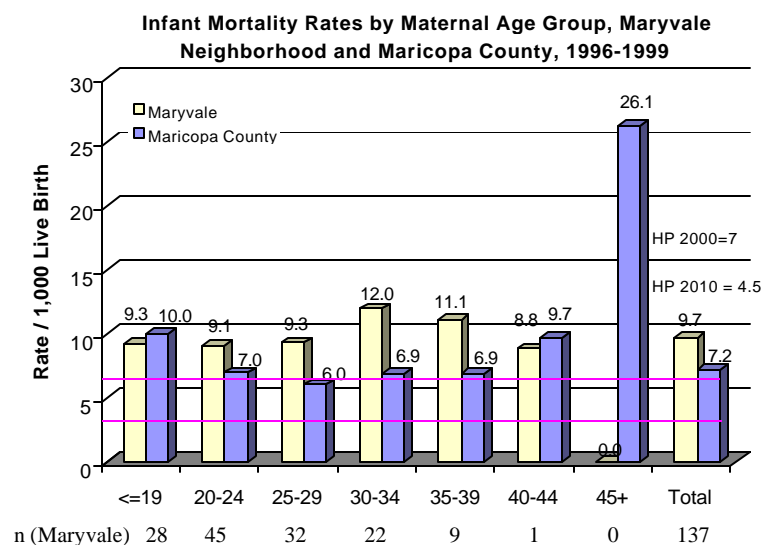


During this period of time, the Maryvale Neighborhood had a higher IMR than Maricopa County. Infant mortality declined in the Maryvale Neighborhood in 1998 (7.5/1,000) and in 1997 for Maricopa County (6.9/1,000) but by 1999 rates had increased to 8.2/1,000 and 7.3/1,000, respectively. Neither area met the Healthy People 2000^{12,13} objective of 7 infant deaths per 1,000 live births in 1999.

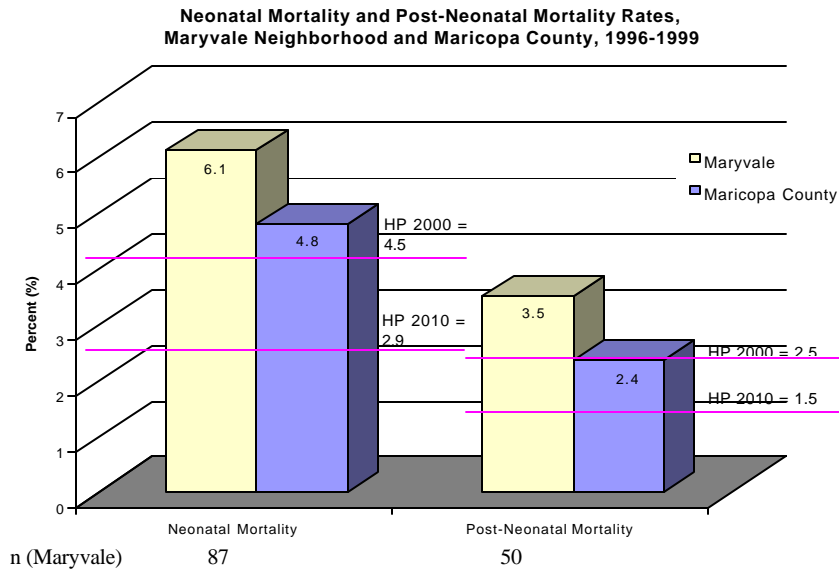


African Americans had the highest IMR in the Maryvale Neighborhood (16.4/1,000) as well as in Maricopa County (15.3/1,000), followed by Native Americans (14.7/1,000) in the Maryvale Neighborhood and Hispanics (7.9/1,000) in the county. All racial/ethnic groups in the Maryvale Neighborhood failed to meet the Healthy People 2000 objective of 7 infant deaths per 1,000 live births. It should be noted that infant mortality rates are derived from small numbers of infant deaths.

Between 1996 and 1999, the IMR among infants born to mothers of all ages was higher in the Maryvale Neighborhood (9.7/1,000) than in Maricopa County (7.2/1,000). The rate in the Maryvale Neighborhood was highest among infants born to mothers aged 30 to 34 years (12/1,000) whereas in the county, the rate was highest among infants born to mothers aged 45 years and older (26.1/1,000). Rates in the Maryvale Neighborhood are in contrast to the typical J-shaped curve associated with infant mortality and maternal age groups. This may be due to the low number of births and deaths to mothers 35 years of age and older. As shown for the county, older and younger mothers are usually associated with the highest infant mortality rates.

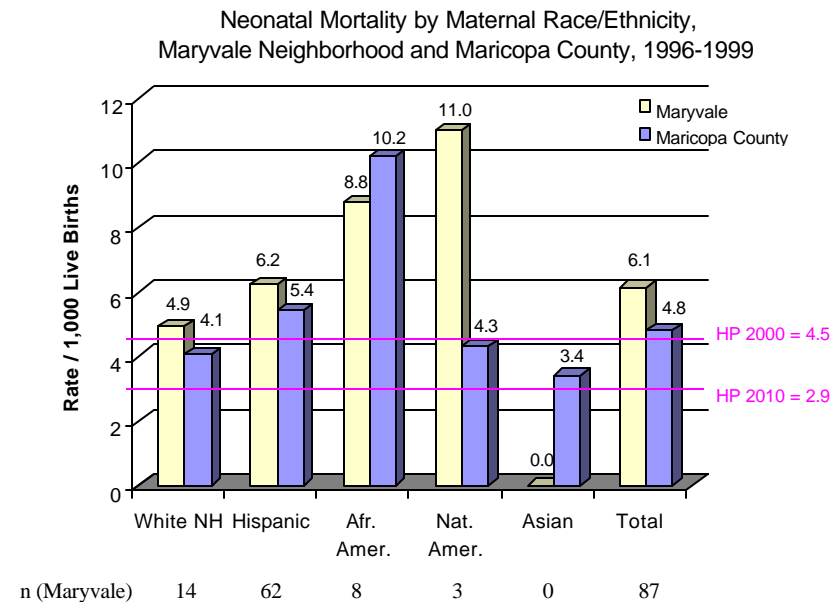


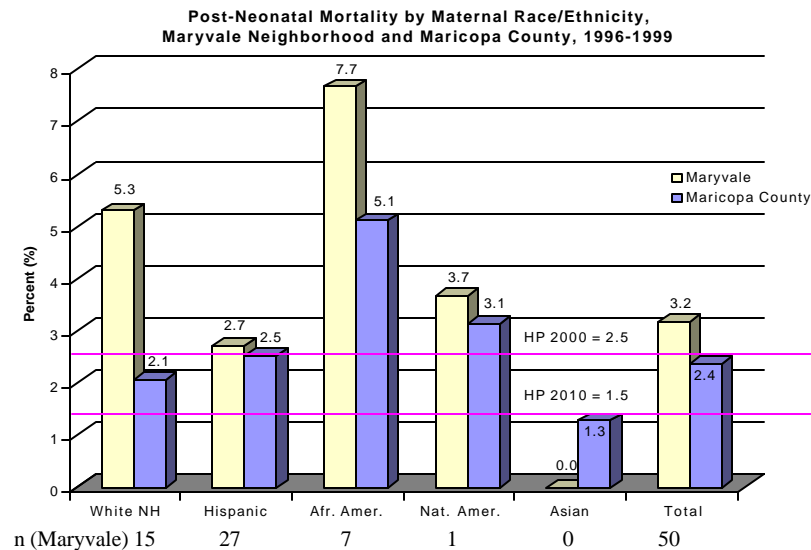
The IMR during the 1996 to 1999 period was highest among infants born to mothers who received no prenatal care in both the Maryvale Neighborhood (20.7/1,000) and Maricopa County (26.8/1,000).



Similar to the county, nearly 2/3 of the infant deaths in the Maryvale Neighborhood occurred during the neonatal period (NMR). Neither the Maryvale Neighborhood (6.1) nor the county (4.8) met the Healthy People 2000 objective of 4.5 neonatal deaths per 1,000 live births. The Maryvale Neighborhood's post-neonatal death rate (PNMR) was higher than the county's rate; the rate did not meet the Healthy People 2000 objective of 2.5 post-neonatal deaths per 1,000 live births.

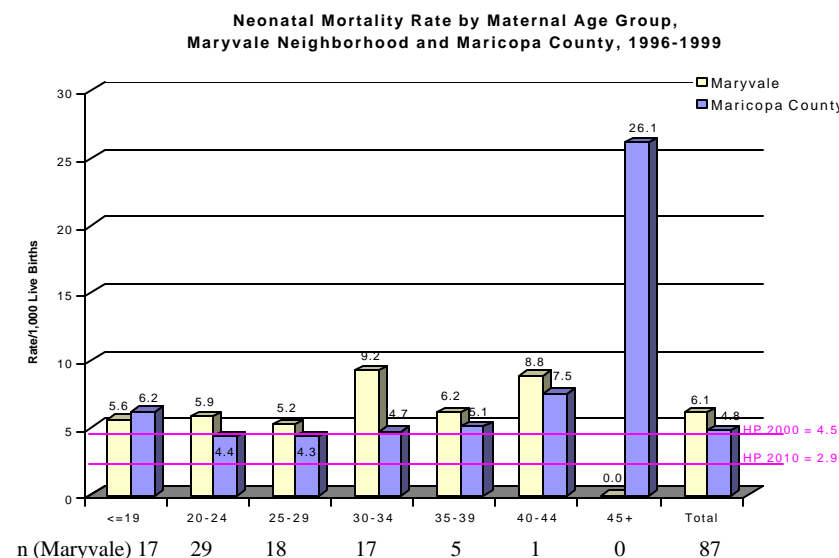
The neonatal mortality rate in the Maryvale Neighborhood from 1996 to 1999 was highest among Native Americans (11/1,000), however, there were only 87 births and 3 deaths among Native Americans. African Americans (10.2/1,000) had the second highest NMR. Countywide, African Americans had the highest NMR. While the overall neonatal mortality rate in the Maryvale Neighborhood was higher than Maricopa County, African Americans in the Maryvale Neighborhood (8.8) fared better than those countywide did (10.2). In Maricopa County, Whites, Native Americans, and Asians achieved the Healthy People 2000 objective of 4.5 neonatal deaths per 1,000 live births.

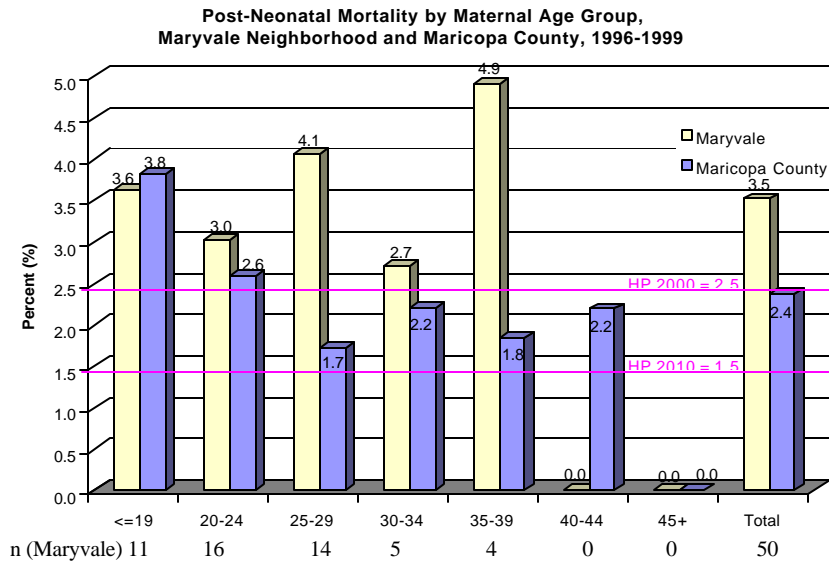




African Americans had the highest PNMR in the Maryvale Neighborhood (7.7/1,000) and in Maricopa County (5.1/1,000), followed by Whites (5.3/1,000) in the Maryvale Neighborhood and Native Americans (3.1/1,000) in the county. Whites, African Americans, and Native Americans in the Maryvale Neighborhood, as well as African Americans in the county, have yet to achieve the Healthy People 2000 objective of 3.5 post-neonatal deaths per 1,000 live births.

The neonatal mortality rate was highest among infants born to mothers in the 30 to 34 -year-old age category in the Maryvale Neighborhood (9.2/1,000) and to mothers 45 years of age and older (26.1/1,000) in Maricopa County. Only Maricopa County women aged 20-29 have achieved the Healthy People 2000 objective of 4.5 neonatal deaths per 1,000 live births.



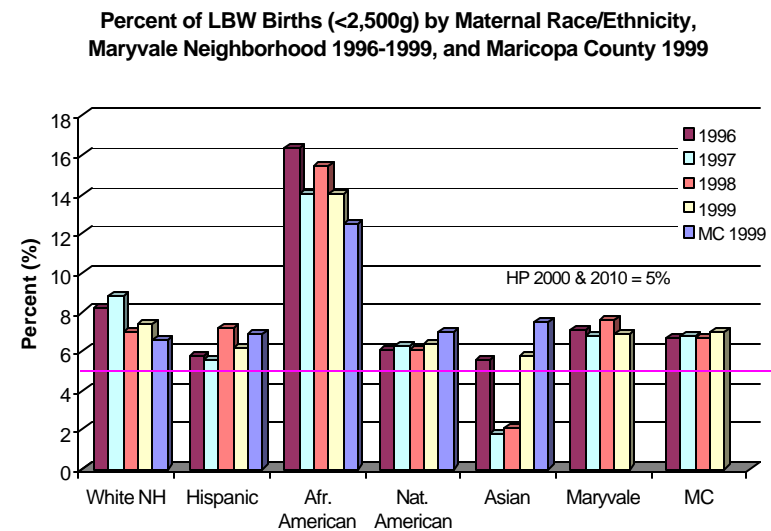


The post-neonatal infant mortality rate in the Maryvale Neighborhood was highest among mothers aged 35-39 (4.9/1,000) followed by mothers 25 to 29 years of age (4.1/1,000), while the rate in Maricopa County was highest among mothers 19 and younger (3.8/1,000) followed by 20-24 year olds (2.6/1,000). No age group has achieved the Healthy People 2010 objective of 1.5 deaths per 1,000 live births.

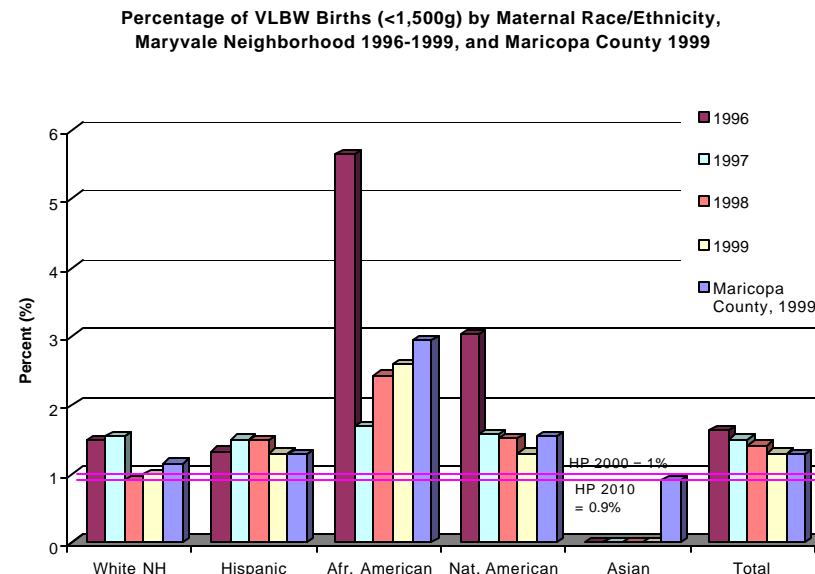
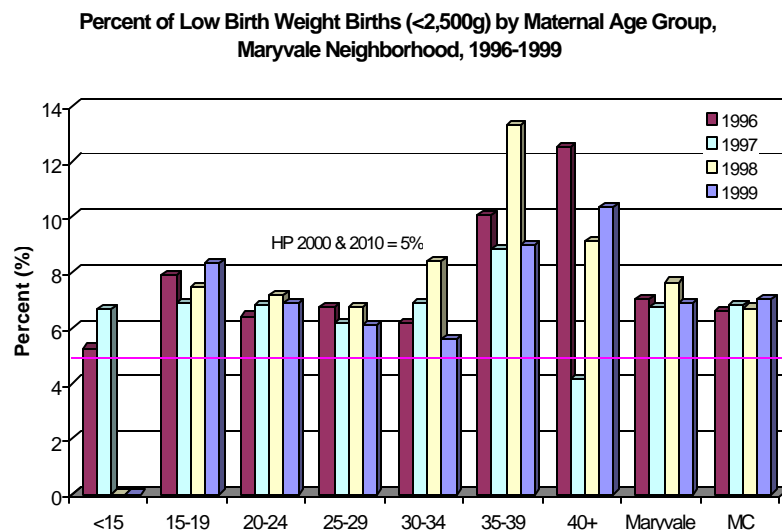
LOW BIRTH WEIGHT AND PRETERM BIRTHS

In 1999, 6.9% (n=262) of the 3,781 live births in the Maryvale Neighborhood were less than 2,500 grams and 1.3% (n=49) of all live births were less than 1,500 grams. The percentage of low birth weight births (LBW; <2,500g) in the Maryvale Neighborhood decreased from 7.6% in 1998 to 6.9% in 1999 while the percentage in Maricopa County increased from 6.7%

to 7.0% for the same years. African Americans had the highest percentages of LBW births (<2,500g) in the Maryvale Neighborhood from 1996 to 1999 and in the county during 1999. Among African Americans living in the Maryvale Neighborhood in 1999, 14% of live births were <2,500 grams: 11.4% were between 1,500 and 2,499 grams, and 2.6% were less than 1,500 grams. No racial/ethnic group met the Healthy People 2000 goal of reducing LBW to less than 5% in 1999.

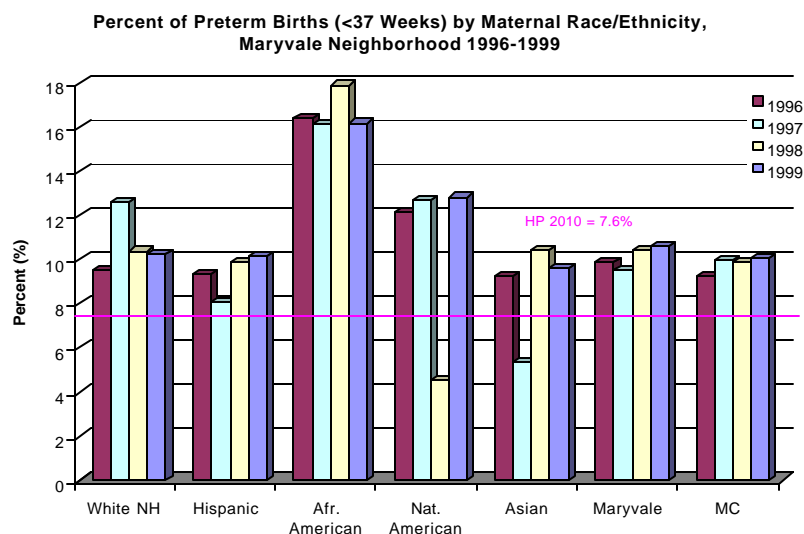


Maryvale Neighborhood infants born to mothers 35 years of age and older were at the highest risk of being LBW, followed by infants born to young mothers (<19 years old). See Appendix A, Map 6 for percent of LBW births by census tract.



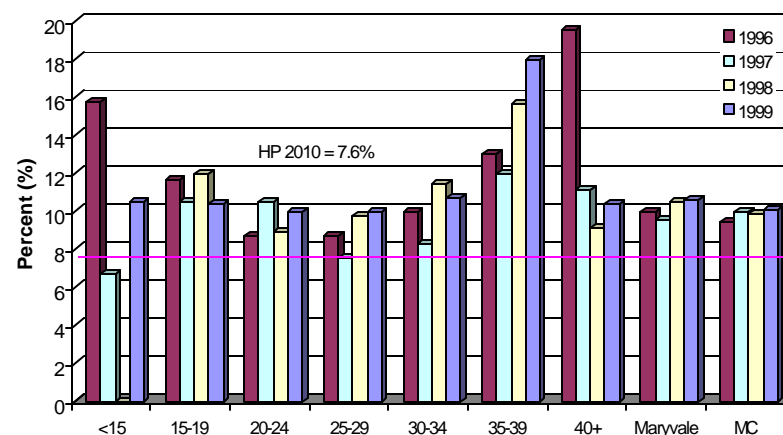
Except for Hispanics, all racial/ethnic groups in the Maryvale Neighborhood had the same or a lower percentage of very low birth weight (VLBW) infants than Maricopa County during 1999. African Americans (3.1%) had the highest average percent of VLBW births (<1,500g) during the four years, followed by Native Americans (1.9%). Except for Asians for which there were few births, no racial/ethnic group in either area met the Healthy People 2000 goal of a reducing VLBW births to 1% in 1999.

African Americans had the highest percentages of preterm births in the Maryvale Neighborhood between 1996 and 1999 (16.6%). In 1999, no racial/ethnic group in the Maryvale Neighborhood achieved the Healthy People 2010 target of reducing preterm births to 7.6%.



The distribution of preterm births across maternal age groups was similar to that for LBW (<2,500g) births. Mothers at either age extreme had an elevated risk of delivering a preterm infant. The four-year (1996-1999) average of preterm births in the Maryvale Neighborhood was 10% of all live births. This was similar to the average of 9.8% in Maricopa County for the same years.

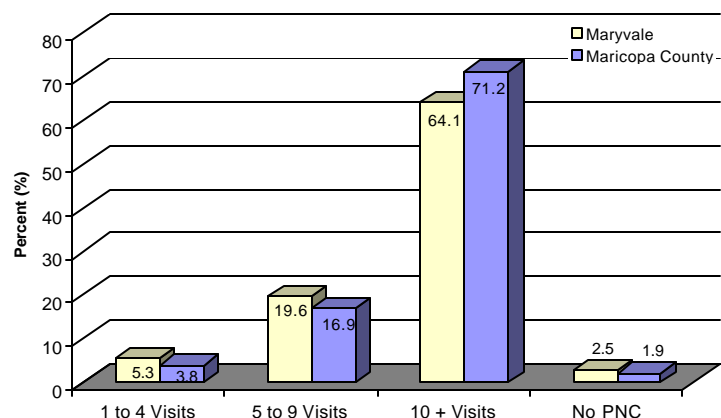
Percent of Preterm Births (<37 weeks) by Maternal Age Group, Maryvale Neighborhood, 1996-1999



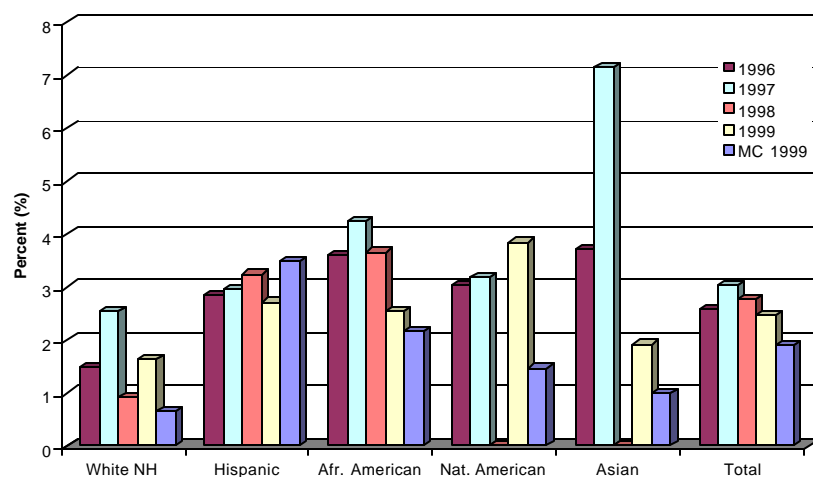
PRENATAL CARE

Maricopa County fared better than the Maryvale Neighborhood with regard to mothers receiving prenatal care (PNC). A higher proportion of pregnant women in Maricopa County received 10 or more prenatal care visits and a smaller percentage had no prenatal care. In 1999, approximately 2.5% of recently delivered mothers in the Maryvale Neighborhood received no prenatal care, compared to 1.9% in Maricopa County. Graph shown on next page

Percent of Mothers Receiving Prenatal Care by Number of Visits, Maryvale Neighborhood and Maricopa County, 1999



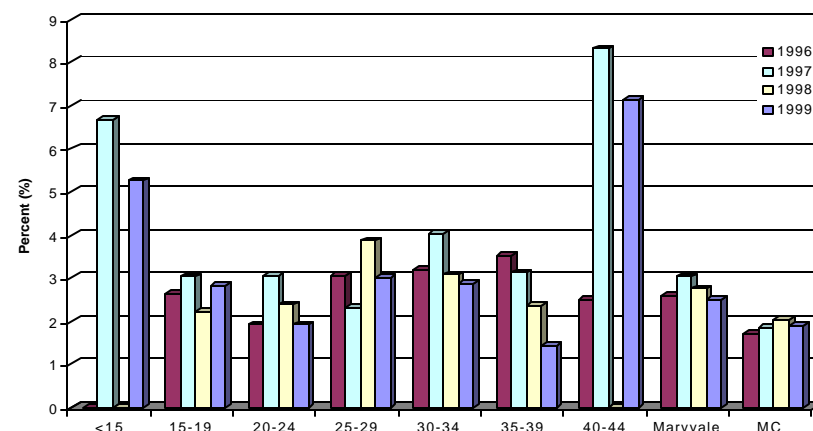
Percent of Mothers Receiving No PNC by Maternal Race/Ethnicity, Maryvale Neighborhood 1996-1999, and Maricopa County 1999

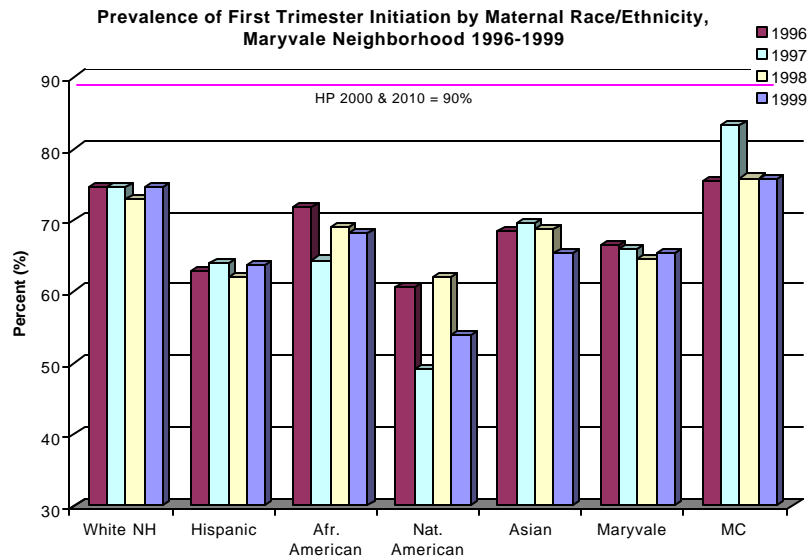


Except for Hispanics, all racial/ethnic groups had a higher percentage of women receiving no prenatal care in the Maryvale Neighborhood than Maricopa County. In 1999, Native Americans had the highest percentage of women receiving no prenatal care (3.8%) followed by Hispanics (2.7%) in the Maryvale Neighborhood. .

Teenage mothers and mothers over 40 years of age were more likely to have received no prenatal care. See Appendix A, Map 7 for the percent of mothers receiving no prenatal care by census tract.

Percent of Mothers Receiving No PNC by Maternal Age Group, Maryvale Neighborhood, 1996-1999

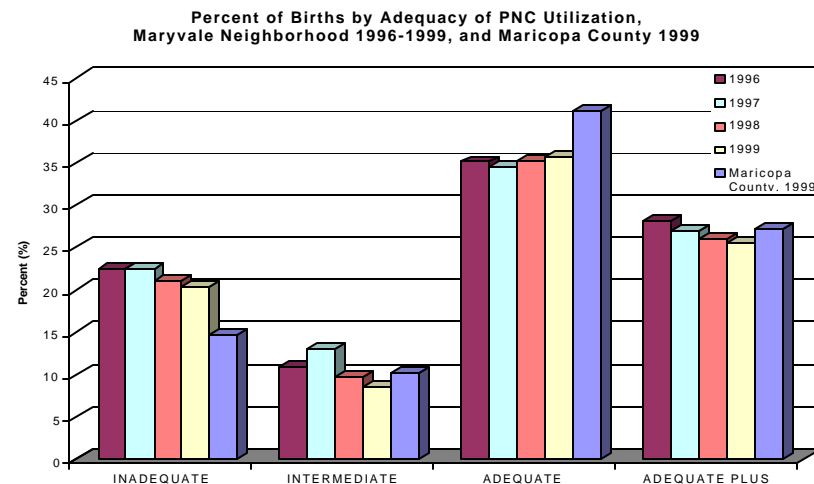




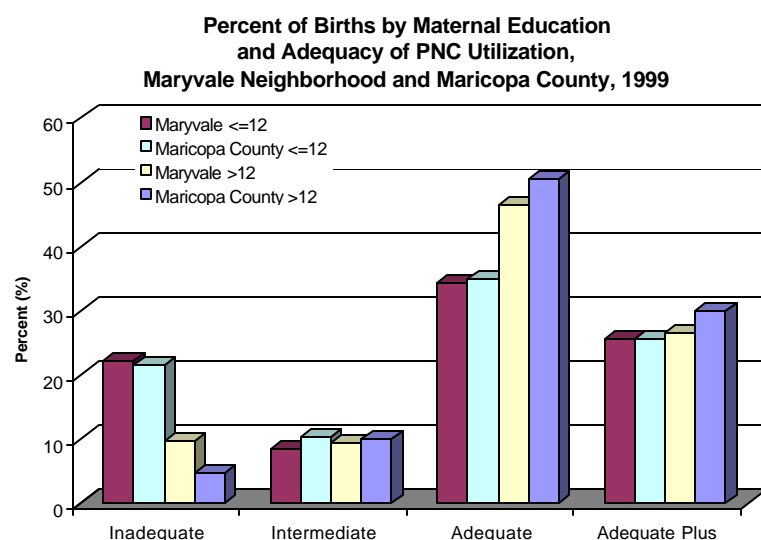
Whites had the highest percentage of mothers receiving first trimester prenatal care in the Maryvale Neighborhood in 1999, followed by African Americans. Neither the Maryvale Neighborhood nor Maricopa County achieved the Healthy People 2000 goal of 90% for first trimester entry into prenatal care.

Adequacy of prenatal care utilization among expectant mothers was determined using the APNCU index⁹. This index characterizes the adequacy of PNC by using the month of initiation and appropriate number of visits depending on the month of PNC initiation and gestational age at birth. The APNCU index does not assess the quality of PNC and does not adjust for risk conditions of the expectant mother; it only assesses PNC utilization.

According to the index, the utilization of PNC in the Maryvale Neighborhood is similar to that in Maricopa County. Mothers were more likely to have adequate or adequate-plus PNC utilization than to have inadequate or intermediate PNC utilization. However, 20.26% of mothers in the Maryvale Neighborhood who gave birth in 1999 showed inadequate prenatal care utilization, compared to 14.56% of Maricopa County mothers. The percentage of mothers in the Maryvale Neighborhood whose PNC utilization was inadequate and intermediate decreased from 1996 to 1999. The percent of mothers in the adequate-plus prenatal care category also showed a decreasing trend from 1996 to 1999.



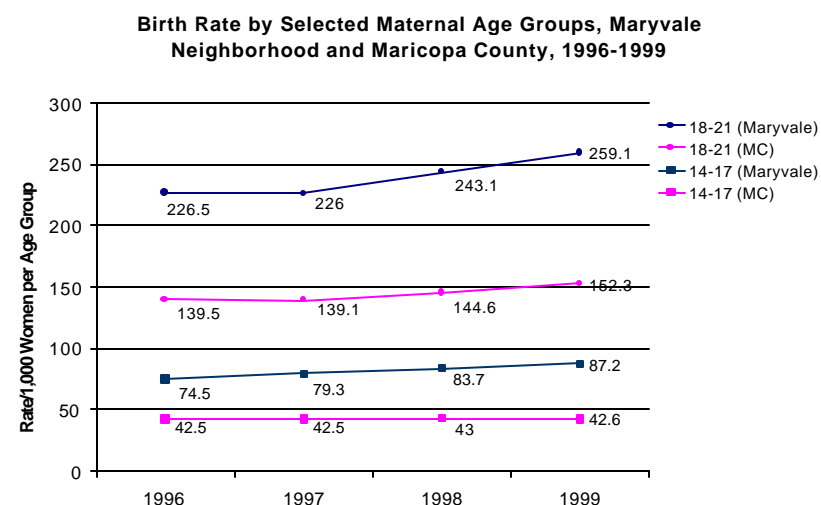
Mothers with 12 or less years of education were more likely to have inadequately utilized PNC, and mothers with more than 12 years of education or more were more likely to have adequately utilized PNC. This pattern is true for both the Maryvale Neighborhood and Maricopa County.



TEEN BIRTHS

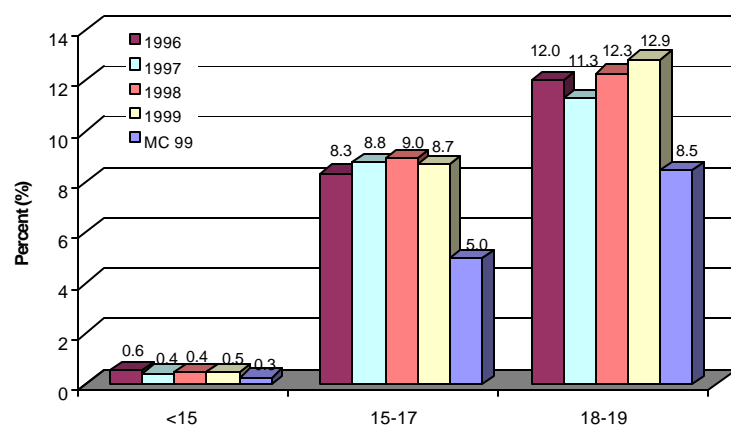
Teen birth rates were calculated for females 17 years of age and younger and females 18 to 21 years of age, because these were the only young female population age groups available by census tract from the 1995 special census of Maricopa County. The Maryvale Neighborhood had higher teenage birth rates than Maricopa County among women 17 years of age and younger and also among the 18 to 21 age group. In 1999, the birth rate in the Maryvale Neighborhood (87.2/1,000) was greater than Maricopa County (42.6/1,000) by more than two-fold. The birth rates for teenage women in both areas increased since 1996.

See Appendix A, Map 8 for percent of teenage births by census tract.

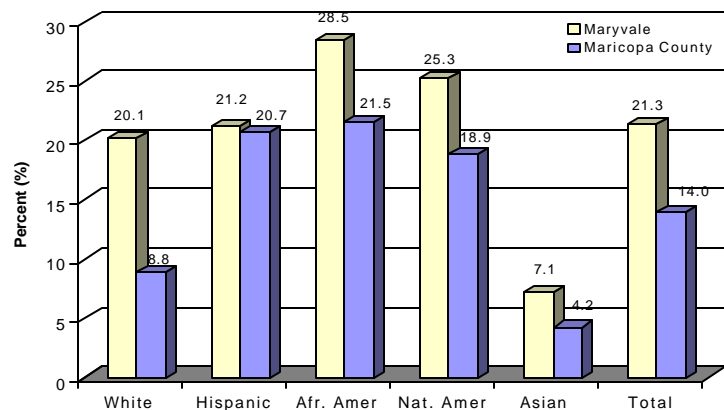


A larger proportion of births to teenage mothers occurred in the Maryvale Neighborhood (21.3%) than in Maricopa County (14%). Mothers 18-19 had the highest percentage of teenage births followed by 15-17 year olds in both the Maryvale Neighborhood and Maricopa County. The Maryvale Neighborhood, however, had a higher percentage of teenage births than the county. See graph on next page.

Percent of Births by Teen Age Group, Maryvale Neighborhood 1996-1999, and Maricopa County 1999



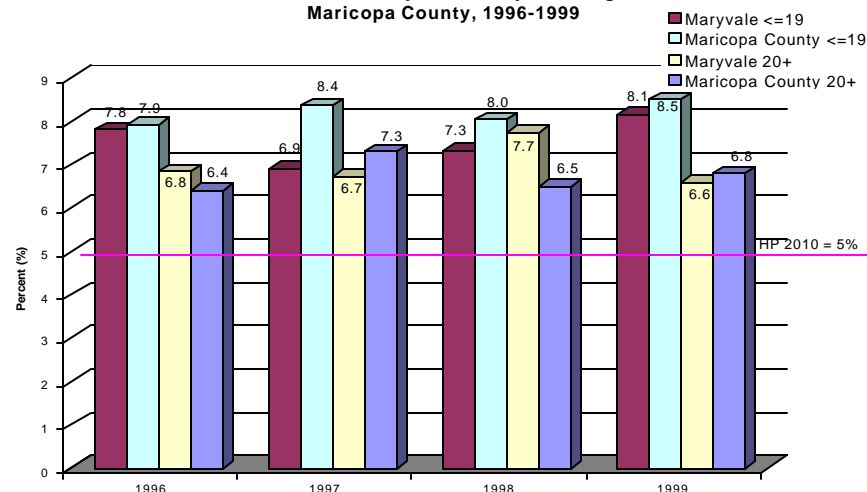
Percent of Births to Mothers 19 and Younger by Maternal Race/Ethnicity, Maryvale Neighborhood and Maricopa County, 1996-1999



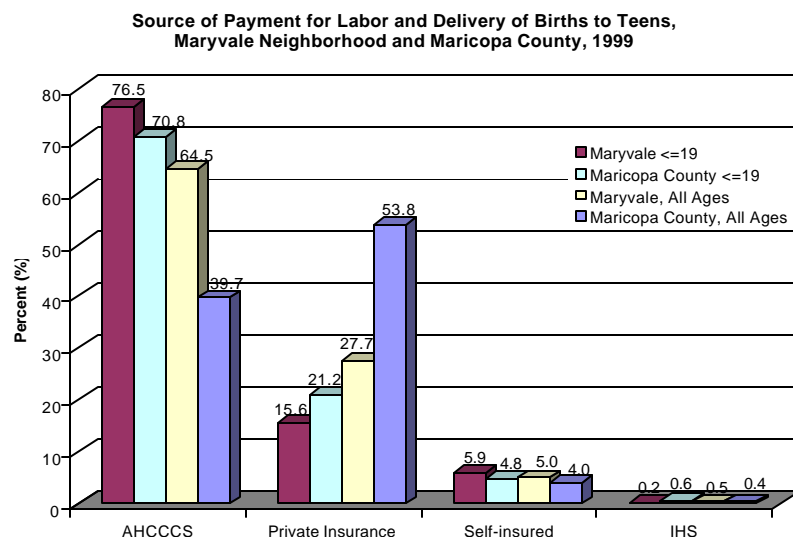
African Americans had the highest percentage of births to mothers 19 and younger in the Maryvale Neighborhood (28.5%) and Maricopa County (21.5%), followed by Native Americans (25.3%) in the Maryvale Neighborhood and Hispanics (20.7%) in the county.

The proportion of LBW births to teenage mothers (less than 20 years of age) was higher in Maricopa County than in the Maryvale Neighborhood from 1996 to 1999. The percentage of LBW births was higher among teenage mothers than mothers 20 years of age and older in all years except 1998.

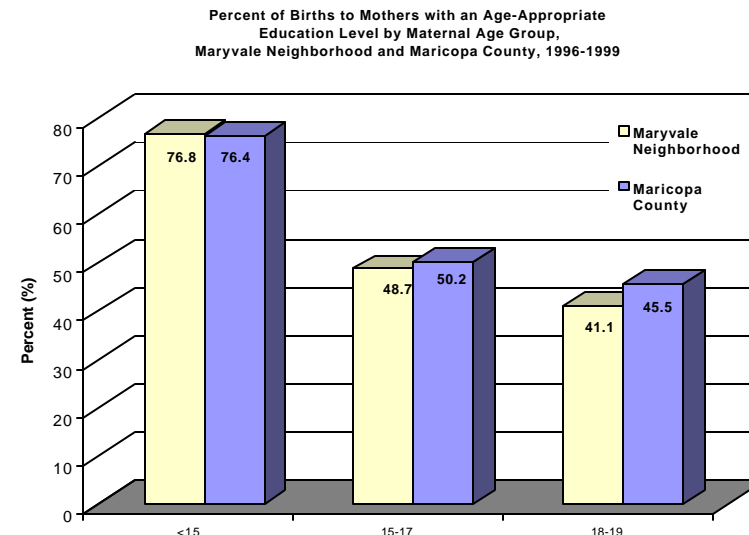
Proportion of LBW (<2,500 g) Births to Teens (<=19) and Mothers 20 and Older by Year, Maryvale Neighborhood and Maricopa County, 1996-1999



In 1999, the highest source of payment for delivery of births to teenage mothers was AHCCCS, both in the Maryvale Neighborhood (76.5%) and in Maricopa County (70.8%). The second largest source of payment was private insurance, which was higher in Maricopa County (21.2%) than the Maryvale Neighborhood (15.6%).



All births were dichotomized into two categories: delivered to a mother with an age-appropriate education level or not¹⁰. An age-appropriate education level for an 11-year-old was fourth grade (or higher) because the majority of people who are 11 years old are in fourth or fifth grade. The age-appropriate education level increased by one year for each year of age increase, such that the appropriate education level for mothers 18 or more years of age was twelfth grade⁵. See graph on the next page.



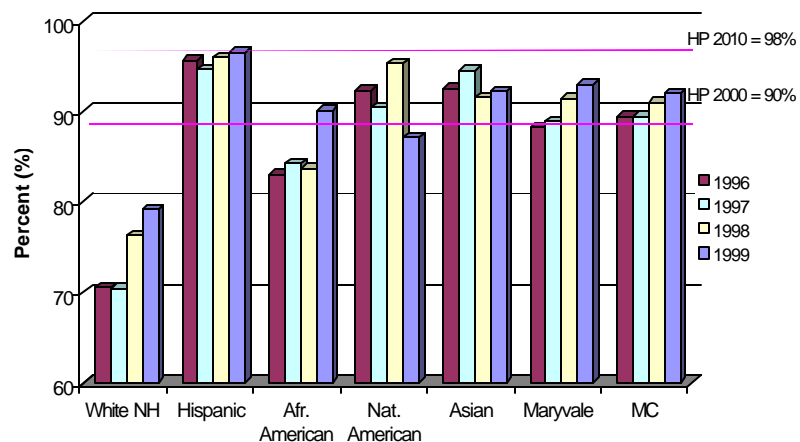
The percent of births to mothers with an age-appropriate education level was the same or higher in Maricopa County than the Maryvale Neighborhood for all age groups. Mothers less than 15 years of age had the highest percent of births to mothers with an age-appropriate education level in the Maryvale Neighborhood (76.8%) and in the county (76.4%).

SUBSTANCE USE

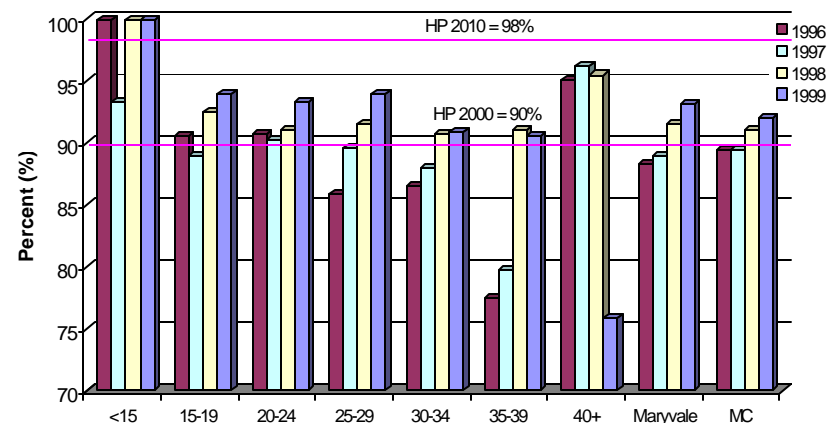
In 1999, the percentage of women abstaining from tobacco use was higher in the Maryvale Neighborhood than in the county (93.1% and 92.1%, respectively). The number of mothers abstaining from tobacco use for all age groups increased from 1996 to 1999 in both the Maryvale Neighborhood and Maricopa County.

The average percentage of women abstaining from tobacco use during pregnancy for the four years was highest among Hispanics (96.6%) and lowest among Whites (79.2%). Only Whites and Native Americans failed to meet the Healthy People 2000 objective of 90% tobacco abstinence in 1999.

Prevalence of Tobacco Abstinence by Maternal Race/Ethnicity, Maryvale Neighborhood 1996-1999

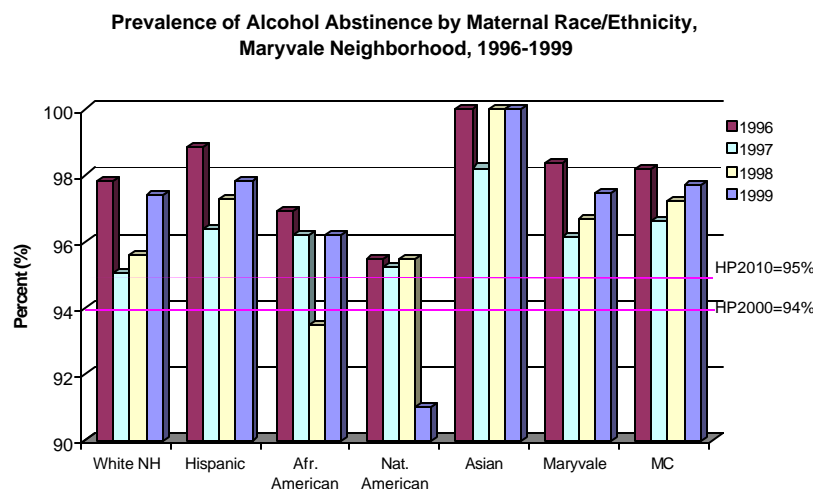


Prevalence of Tobacco Abstinence by Maternal Age Group, Maryvale Neighborhood 1996-1999



Except women over the age of 39 for which there were only 29 births, all age groups met the HP 2000 objective (90% abstaining) for tobacco use in 1999. See Appendix A, Map 9 for the prevalence of tobacco abstinence by census tract.

In 1999, the percentage of pregnant women abstaining from alcohol consumption in the Maryvale Neighborhood (97.5%) and Maricopa County (97.7%) was comparable. All racial/ethnic groups met the HP 2010 objective for abstinence from alcohol except Native Americans in 1999. Native Americans showed a decrease in alcohol abstinence from 95.5% in 1998 to 91% in 1999. This decrease may be a reporting artifact.



Since 1997, the percentage of women abstaining from alcohol consumption during pregnancy steadily increased for women of all age groups in the Maryvale Neighborhood and the county. See Appendix A, Map 10 for the prevalence of alcohol abstinence by census tract from 1996 to 1999.

